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ACTIVITIES OF THE ACADEMY OF SCIENCES
UKRAINIAN SSR

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ACTIVITIES OF THE ACADEMY OF SCIENCES UKRAINIAN SSR

Following is the translation of several articles from Ukrainian-language publications. Complete bibliographic data accompanies each article.

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NEW DEPARTMENTS AND LABORATORIES

Following is the translation of an unsigned article in the Ukrainian-language publication Dopovidi Akademii Nauk Ukrayinskoj RSR (Bulletin of the Academy of Sciences Ukrainian SSR), No. 5, Kiev, 1962, pages 681-6837.

1. The Presidium of the Academy of Sciences Ukrainian SSR has resolved to reorganize the Laboratory of Water Chemistry and Technology of the Institute of General and Inorganic Chemistry and to include it in the Vishgorod's'k group of laboratories of the same institute. The following laboratories are included in this group:

the Laboratory of the Physico-Chemical Methods of Purification of Industrial Waste Waters. The chief aims of this laboratory is the study of the physicochemical processes of the industrial water purification and utilization of some valuable chemical components recovered from the industrial waste streams;

the Control Laboratory of Drinking Water Composition engaged chiefly in the study of the physicochemical purification processes of water used for drinking and agricultural purposes;

the Laboratory of Automation of the Physicochemical Processes of Water Treatment. The basic task of this laboratory is development of the quantitative and qualitative automation principles to control the technological processes of the water treatment;

the Laboratory of the Theory of Processes and Apparatus Used for Water Treatment and New Technology. The basic directions of this laboratory include development of the theory of processes and apparatus, as well as designing new apparatus and equipment for chemical and physicochemical conditioning of drinking water. In addition, the laboratory checks the effectiveness of the industrial water treatment.

2. Due to the need to deal with many water problems in the national economy and the availability of facilities and scientific personnel at the Institute of Hydrology and Hydraulic Engineering of the Academy of Sciences Ukrainian SSR, the Presidium of the Academy of Sciences entrusted the Institute with development of scientific principles of the complex utilization of water resources of the Ukrainian SSR. Hence, the Department of Surface Waters at the Institute is reorganized into the Department of Complex Water

Problems. The primary aim of this Department is the study of water distribution among the economic rayons of the Ukrainian SSR.

3. The Presidium of the Academy of Sciences Ukrainian SSR has resolved to organize the Department of Industrial Technology and Production of Metalloceramic Products at the Institute of Metalloceramics and Special Alloys of the Academy of Sciences Ukrainian SSR.

This department will work chiefly on the following subjects:

- 1) development of industrial methods for production of metal powders, refractory metal powders, and metalloceramic products;
- 2) introduction of various metalloceramic products into industry and rendering aid to industrial enterprises;
- 3) development of methods for evaluating how well the metalloceramic materials are used, and selecting the most suitable ways for their introduction into industry;
- 4) establishing state standards for metal powders and metalloceramic products.

4. Due to the transfer of departments, laboratories, and stations of the Institute of Geology of Natural Resources of the Academy of Sciences Ukrainian SSR to the newly organized Geophysics Institute of the Academy of Sciences UkrSSR, the Presidium of the Academy of Sciences has resolved to organize the Department of Petroleum and Gas Deposits at the Institute of Geology of the Natural Resources of the Academy of Sciences UkrSSR.

The basic tasks of this department will be to deal with the theoretical foundations of the origin of petroleum and natural gas and their local distribution, study of the rock formations associated with petroleum and gas deposits, investigation of the rock structures which entrain the hydrocarbons during their migration, and study of some geological problems dealing with history of the rich petroleum regions.

In order to improve the organizational structure of the same Institute, its departments listed below are reorganized: the Department of Geochemistry and Genesis of Mineral Fuels becomes the Department of Geochemistry of Mineral Fuels; the Laboratory of Mineral Fuels becomes the Department of Chemistry of Organic Minerals; the Department of Hydrogeology and Engineering Geology becomes the Department of Petroleum and Gas Migration and Hydrogeology of Petroleum Deposits; the Petrography Laboratory -- the Department of Lithology of Petroleum-bearing Rocks; the Department of Non-Metallic Minerals -- the Department of Caustobioliths; the Department of Ore Minerals -- the Department of Geochemistry of Rare and Scarce Elements of Petroleum and Carboniferous Deposits.

5. The Presidium of the Academy of Sciences UkrSSR has resolved to organize a scientific-experimental station, "New Plants", at Glevakha, Vasil'kiv's'kiy Rayon, Kiev's'kaya Oblast.

The task of this station will be production of seeds and sprouts of decorative plants, shrubs, and flowers.

6. The Presidium of the Academy of Sciences UkrSSR has resolved to organize the Structural Laboratory of the Computing Techniques in Power Engineering at the Institute of Electrical Technology of the Academy of Sciences UkrSSR, employing the existing group of specialists concerned with introduction of computing methods into electric power production systems at the Kiev Power Engineering Department.

The basic tasks of this laboratory will be:

- (a) Application of new mathematical methods for analysis and calculations of complex power engineering systems and power production installations;
- (b) development of principal problems and typical calculation programs related to effectively applying computing methods during designing and operation of electric power production systems;
- (c) research in the field of cybernetics as applied to power production systems with the use of computing techniques.

Candidate of Technical Sciences G. O. Klimenko, Assistant Director for science at the Institute, has been appointed to head this laboratory.

7. The Presidium of the Academy of Sciences UkrSSR has resolved to organize the Electric Impulses Laboratory at the Institute of Power Engineering of the Academy of Sciences UkrSSR on the basis of the nonstructural group of condenser welding.

The basic concern of this laboratory will be:

- (a) development of theoretical, technological, and design problems in various methods of condenser welding of metals having different thicknesses and cross-sectioning;
- (b) surface and localized treatment of metals with electric impulses;
- (c) development of stable alloys of metals with semiconductors;
- (d) research into the new method of metal treatment using electric pulses.

8. The Presidium of the Academy of Sciences UkrSSR has resolved to organize the Laboratory of the Electroprospecting Automation, the Physico-Mechanical Laboratory, and the Acoustics Laboratory.

The principal tasks of the Laboratory of Electroprospecting Automation will be to develop new principles of measuring the electric parameters of geophysical objects, automation of electroprospecting, design of new electroprospecting equipment to facilitate the complex measurements and machine processing of geophysical data.

The Physico-Mechanical Laboratory will be dealing with research into physico-mechanical and chemical processes and their effect on deformation, formation, and propagation of micro-fissures stemming from fatigue of solid bodies in a given medium.

The Acoustics Laboratory will conduct research on application of spring vibrations during the geophysical prospecting of ore deposits, automation of acoustic control methods, and application

of the research results for the needs of the petroleum and mining industries.

9. The Presidium of the Academy of Sciences UkrSSR has resolved to organize the Laboratory of Dynamics of Engine Heat Processes, and the Laboratory of Heat Physics of High Temperature Engines at the Institute of Combustion Engineering on the basis of the Department of Combustion Engines.

The Laboratory of Dynamics of Heat Processes will conduct research on dynamic processes of transforming thermal energy in high-temperature engines (gas and steam turbines, gas-steam engines, special-purpose engines, etc.), development of the scientific principles for establishing the new control methods of engine heat processes; development of theory and calculation methods (with the use of analog and digital computers) for controlling the engines during varying hydraulic and heat parameters which are constantly present in thermodynamic and mechanical systems; study of the flow patterns of fluids and gases in control systems and feeding of engines under high pressure and temperature; development of the model methods dealing with dynamic problems and control of the engine heat processes.

The principal aims of the Laboratory of Heat Physics of High-Temperature Engines will be the theoretical and experimental research of new effective cooling methods of engines and engine components (gas and steam turbines, devices for conversion of the thermal energy directly to electric energy, etc.), solution of some heat transfer problems, thermal conductivity of the hydraulic systems which are utilized in high-temperature engines and digital computers; study of the general principles of heat exchange at high temperatures, centrifugal forces and other periodic effects; research into principally new methods for cooling high-temperature devices.

Academician I. T. Shvet' will be responsible for the scientific work of both laboratories.

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MISCELLANEOUS INFORMATION

/Following is the translation of an unsigned article in the Ukrainian-language publication Dopovidi Akademii Nauk Ukrains'koy RSR (Bulletin of the Academy of Sciences Ukrainian SSR, No 5, Kiev 1962, pages 683-684.)

1. A new section named "Biochemistry of Nervous System" has been organized as a part of the Scientific Council on Complex Problems of Physiology, which will coordinate the scientific work in this field in the USSR. Academician O. V. Palladin will head the section.

2. The Presidium of the Academy of Sciences UkSSR has resolved to organize a permanent scientific seminar on problems of refractory coatings on metal and non-metal materials at the Department of Technical Sciences of the Academy of Sciences UkSSR.

3. Due to the work concentration on petroleum and gas geology at the Institute of Geology of Mineral Deposits of the Academy of Sciences Ukrainian SSR, the Department of Petroleum and gas has been closed at the Institute of Geological Sciences of the Academy of Sciences UkSSR.

4. The Presidium of the Academy of Sciences of the Ukrainian SSR has resolved to reorganize the Institute of Geology of Mineral Deposits in L'vov into the Institute of Geology of Mineral Fuels at the Academy of Sciences UkSSR.

5. The Head of the Department of Physics and Mathematics of the Academy of Sciences UkSSR, Academician Yu. O. Mitropol's'kiy, has reported to the Presidium of the Academy of Sciences UkSSR on the International Symposium on Non-Linear Oscillations, held in Kiev from 12 to 18 September 1961.

It was noted by the Presidium that this symposium was one of the largest devoted to the theory of oscillations. Representatives of more than 15 countries participated, presenting the basic points of the theory of non-linear oscillations. Considerable attention was paid at this symposium to application of methods of non-linear oscillations to problems of physics and industry.

Very fruitful discussions were held at the symposium, which were stimulating to the further development of this branch of science.

6. The Presidium of the Academy of Sciences Ukrainian SSR has resolved to celebrate in 1963 the 100 birthday anniversary of the first President of the Academy of Sciences of the Ukrainian SSR, the outstanding scientist, Academician V. I. Vernads'kiy.

A special organizational committee headed by Academician M. P. Semenenko was selected to carry out all necessary arrangements for this celebration.

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GUEST SESSION OF THE DEPARTMENT OF TECHNICAL SCIENCES
OF THE ACADEMY OF SCIENCES UKRAINIAN SSR IN ODESSA

Following is the translation of an article by S. P. Sushon in Ukrainian-language publication Prikladna Mekhanika (Applied Mechanics), Vol 8, No 3, 1962, Pages 342-3467

Following the decisions of the XXII CPSU Congress on the advancement of science and its relations with production, the Department of Technical Sciences of the Academy of Sciences Ukrainian SSR, together with Economic Council of the Odessa Economic and Administrative Rayon, organized a guest session in Odessa on 22-24 November 1961. The session was dedicated to the 250th birthday anniversary of the great Russian scientist M. V. Lomonosov. The program of the session was worked out by the Office of the Department of Technical Sciences with emphasis on the problems of Odessa industries and institutions.

The following scientists of the Soviet Ukraine participated in the session: Academicians A. C. Vasilenko, A. D. Kovalanko, Z. I. Nekrasov, B. Ye. Paton, G. M. Savin, K. F. Starodubov, S. V. Serensen, I. M. Fedorchenko, K. K. Khrenokh; Corresponding Member of the Academy of Sciences USSR L. M. Sapozhnikov, Corresponding Members of the Academy of Sciences UkrSSR A. A. Gorshkov, B. D. Grozin, O. G. Ivashnenko, V. F. Kopitov, M. O. Kil'chevs'kiy, V. M. Mikhaylovskiy, P. P. Nesterov, G. S. Pisarenko, M. S. Polyakov, G. V. Samsonov, A. P. Filippov, and others.

Party and economic leaders of the Odesskiy Economic and Administrative Rayon also participated actively in this session, as well as directors and engineers of industry, professors, teachers, aspirants, students of Odessa higher educational institutions, workers of project and design bureaus. The total number of participants was over 400 people.

The number of papers presented at plenary and section meetings was 78, all devoted to theoretical and applied problems of science and industry. The scientists of institutions of the Academy of Sciences Ukrainian SSR presented 53 papers and the remaining 25 were presented by representatives of scientific institutions and industrial organizations of the Odesskiy and Khersonskiy sovnarkhozes.

The session was opened by the Head of the Technical Sciences

Department, Academy of Sciences Ukrainian SSR, Corresponding Member of the Academy of Sciences UkSSR G. V. Samsonov.

The following papers were presented at the plenary session:

- (1) "Lomonosov and Technology", by A. O. Vasilenko;
- (2) "Tasks of Science and Technological Progress", by G. V. Samsonov;
- (3) "Industry of the Odesskiy Sovnarkhoz and Its Long-Term Development", by D. I. Polyakov (Head of the Odesskiy Sovnarkhoz);
- (4) "Present State and Future Development of the Welding Industry in the USSR", by B. Ye. Paton;
- (5) "Prospects for the Development of Power Engineering in the USSR", by F. T. Markovs'kiy;
- (6) "Modern Advances in the Casting Industry in the USSR and Abroad", by A. A. Gorshkov;
- (7) "Property Changes of Materials Under High Pressure, Temperature, Impact, and New Technological Processes", by B. D. Grozin.

All the remaining papers were presented at section meetings.

1. Section on Mechanics. The work of this section was directed by Academician G. M. Savin. Academicians of the Academy of Sciences Ukrainian SSR A. O. Vasilenko, A. D. Kovalenko, G. M. Savin, and S. V. Serensen, Corresponding Members of the Academy of Sciences of Ukrainian SSR P. P. Nesterov, M. O. Kil'chevs'kiy, G. S. Pisarenko, A. P. Filippov, in addition to the following outstanding scientists of Odessa, Doctors of Technical Sciences I. Ye. Prokopovich, Ya. S. Nudel'man, and Z. I. Reut participated in this section. About 100 representatives from higher educational institutions, research organizations, project and design bureaus, industrial and plant laboratories were present at section meetings.

G. M. Savin emphasized in his short introductory speech the problems of structural and material strength, the need of new materials (polymers, glass, plastics, and others). He also stressed the necessity of preparing the specialists in the strength of materials field at universities and technology institutions of the Ukrainian SSR as planned for the next 15-20 years. All ten papers presented at this section were devoted to strength problems.

A. D. Kovalenko (Institute of Mechanics at the Academy of Sciences Ukrainian SSR) in his paper "New Results in the Study of Stressed States of Turbine Components" pointed to new methods in the theoretical study of turbine components designed in the form of conical shells.

The paper of A. P. Filippov (Laboratory of Hydraulic Machinery at the Academy of Sciences UkSSR) "Development of Methods Used in Calculating the Strength and Dynamic Properties, and Utilization of Computers" noted the effectiveness of modern computers and other mathematical methods for solving strength problems and dynamic properties of plates and shells with complex boundary problems.

M. E. Garf (Institute of Casting Production at the Academy of Sciences UkSSR) presented a paper, "Automation of Fatigue Tests with Respect to Load Programming."

V. F. Yatsenko (Institute of Mechanics at the Academy of Sciences UkSSR) spoke on the physical and mechanical characteristica of plastics under temperature and velocity loads with respect to time.

S. V. Malashenko (Institute of Mechanics at the Academy of Sciences UkSSR) familiarized his listeners with the introduction of the pneumocontact gauges which make it possible to observe the structural changes during tests.

V. M. Matveyev (Institute of Mining imeni M. M. Fedorov at the Academy of Sciences of UkSSR) in his paper "Theory of Machine Vibrations and Methods for Their Elimination" spoke on some research studies being carried out at his institute.

P. P. Nesterov (Institute of Mining imeni M. M. Fedorov at the Academy of Sciences UkSSR) in his paper, "Technological Policy in the Production of Steel Cables," presented results of laboratory and industrial tests and informed his listeners on the direction of research work aimed at developing better steel wire cables. He also spoke about the results of industrial testing of cables of certain designs developed at the Institute and now in use in Czechoslovakia. As a result of experimental testing it became clear that the service of the cables designed at the Institute is four times longer compared with cables of other designs.

V. S. Diratsy (Odessa Polytechnical Institute) spoke about the electromagnetic measurements of the tensile strength of steel wire cables.

L. B. L'vlikh (Odessa Polytechnical Institute) spoke about the deformation mechanism of contact surfaces and designing of a new model of this mechanism based on the stability loss by a thin surface film.

After discussion of papers presented at this section, a resolution was accepted which listed the chief future tasks in this field, These are as follows:

1. Wider use of mathematical calculation methods and computers during experimental and theoretical research in the strength of materials and machine components field.

2. Increase in theoretical and experimental research in order to devise new calculation methods for application in turbine designing.

3. Increased theoretical and experimental research into new materials (plastics, polymers, etc.).

4. Further study of the structural mechanics of steel wire cables at scientific research institutions and industrial organizations. For this purpose the State Committee of Council of the Ministers Ukrainian SSR on Coordination of Research should direct the development of scientific and industrial research aimed at improvement of the structural and technological design of steel wire cables

and introduction of the most progressive methods into their production.

5. Increasing research aimed at developing new study methods into structural stresses, utilizing for this purpose new physical principles.

6. Considering the research newness of load programing, development of scientific and structural investigations aimed at designing new equipment and programing methods of power regimes, using for this purpose experimental installations, should be of prime importance.

7. Reorganization of the Laboratory of Hydraulic Machines at the Academy of Sciences UkrSSR (Khar'kov) into the Institute of Machine Dynamics should be considered as very opportune.

8. The originality of theoretical research conducted at the Odessa Polytechnical Institute and described by the speakers should be noted.

9. It is necessary to develop further the research work in the field of material and structural strength and to improve the interchange of Odessa research institutions with other organizations of the Academy of Sciences the Ukrainian SSR.

10. Along with the development of mechanics for the next 10-20 years, it is necessary to foresee the new directions in the strength field and to make the Ministry of Higher and Secondary Special Education Ukrainian SSR responsible for preparation of new specialists in this branch of science at universities and polytechnical institutes of the Ukrainian SSR.

II. Section of Welding and Cutting. Academician of the Academy of Sciences Ukrainian SSR B. E. Paton directed the work of this section. About 200 people were present at this section and 13 papers were presented, including seven by representatives of the Academy of Sciences Ukrainian SSR, and six by representatives from Moscow, Kiev, Odessa, and Nikolayev.

The papers presented at the section discussed the problems of new welding methods, technological processes of welding and cutting, new equipment for arc and contact welding by open arc in a protective atmosphere, gas-flame treatment of metals, gas cutting of ship components, renovation of machine components by fusing on, as well as other progressive methods of welding and cutting of ferrous and nonferrous metals.

A very interesting discussion at this section concerned the welding methods in practice by Odessa industrial organizations. Measures of the Odesskiy Sovnarkhoz were studied and approved, which were directed to further development of welding industry and mechanization of welding works at Odessa industrial organizations in 1962-1963.

The section noted the great successes achieved by cooperation of scientists and industrial workers of the Ukraine in the development of welding technology and the advances of the Odesskiy Sovnarkhoz in this field. Concrete measures were recommended for the

Odesskiy and Khersonskiy sovnarkhozes concerning the production of welding equipment, spare parts, technological, and auxiliary materials needed for complex mechanization and automation of welding processes. It was suggested that the number of specialists in this field be increased by preparing the engineers-welders at the Odessa Polytechnical Institute and organization of special courses for preparation of welders for the Odesskiy Sovnarkhoz.

III. Section of Automation and Machine Building. Academician of the Academy of Sciences Ukrainian SSR K. K. Khrenov directed the work of this section. About 90 people participated in this section, at which ten papers were presented and discussed. One of the papers, "Powder Metallurgy as a Highly Productive Method for Production of Machine Components and Instruments", by Doctor of Technical Sciences D. A. Krushins'kiy was presented at the plant and aroused great interest and approval among machine builders.

The chief attention in the presentation and discussion of papers was paid to theoretical and applied problems of automation, creation of automated equipment and their complexes in power engineering, machine building, metallurgy, transportation, and machine instructions. In addition, some problems of telemechanics and tele-communication systems were considered.

The paper of the Corresponding Member of the Academy of Sciences Ukrainian SSR O. J. Ivakhnenko, "Application of the Invariant Theory and Complex Control to Automated Self-Educational Systems", was of interest.

Several papers were devoted to new materials for automated devices and general machine building.

The section passed a resolution, noting the scientific and practical value of the papers presented, the fruitful work of the section for further development of industry and science in the Odesskiy Economic and Administrative Rayon. A number of studies were planned, to be carried out through the joint efforts of institutions of the Academy of Sciences Ukrainian SSR, Odessa industries, and scientific and planning institutions. These studies will concern machine building, automation, power engineering, etc.

IV. Section of Power Engineering, Candidate of Technical Sciences of the Academy of Sciences Ukrainian SSR G. M. Shchogolev directed the work of this section.

About 60 people took part in this section, ten papers were presented and discussed. Of this number, nine papers were presented by the representatives of the Academy of Sciences Ukrainian SSR, and one, by a representative from the Odessa Polytechnical Institute.

The majority of papers presented were devoted to problems of heat energy, especially to calculation, design, and building of gas turbines of various power capacity, high temperature and hydromechanical processes, improvement of the fuel qualities, cooling and heat balances of plants, thermodynamic analysis of new converters of heat energy into electrical energy and the place of these systems in modern power engineering and problems of fuels and power

requirements of the Ukrainian SSR. The use of computers in power engineering systems was also discussed, as well as protection of electric equipment from corrosion, short circuiting to ground, etc.

Joint interests of the Academy of Science institutions with certain Odessa higher educational institutions (Polytechnical Institute, Institute of Maritime Fleet Engineers, Institute of Refrigeration Industry, and others) were defined at this section.

The resolution passed by the section gave a positive evaluation of activities presented in papers, as well as planning of some future joint studies. The participants at this section noted the high qualifications of the heating specialists of the Odesskiy Sovnarkhoz.

The representatives of Odessa scientific institutions and educational organizations proposed to organize in Odessa a branch of the Institute of Heat Power Engineering of the Academy of Sciences Ukrainian SSR.

V. Metallurgy Section. Corresponding Member of the Academy of Sciences Ukrainian SSR A. A. Gorshkov directed the work of this section. The number of people attending this section was about 125; eleven papers were presented, including seven by scientists of the Academy of Sciences Ukrainian SSR, and four by representatives of the Odesskiy and Khersonskiy sovnarkhozes.

Two meetings of the section were held at the Plant imeni October Revolution and at the TsKTB [?] of Casting Processes of the Odesskiy Sovnarkhoz. This attracted many specialists from the Plant imeni October Revolution, the Steel Cables and Rope Plant, Metallurgical Plant imeni Dzezhinskiy, and others to take part in work of the section.

All papers and discussions were devoted to theoretical and applied problems of ferrous metallurgy, the casting industry, and its automation and mechanization, new processes and equipment aimed at production of a higher quality steel, cast iron, the production and use of new types of fuels, molding and other materials, economical production of rolled stock from rare and powder metals, etc.

The resolution passed by this section noted the successes of Odessa industries in casting and metallurgical productions, automation and complex mechanization of the casting industry, continuous rolling processes, and others. The achievements of the Institute of Ferrous Metallurgy and Castings at the Academy of Sciences Ukrainian SSR regarding the technological perfection of the rolled stock production and thermal treatment of metals and alloys were also noted, as well as cast iron crystallization, increasing the wear-resistance of metals and alloys, improving the quality of cast iron castings, deoxidation of steel, etc. The principal directions of the joint efforts of institutes of the Department of Technical Sciences of the Academy of Sciences Ukrainian SSR and higher educational organizations and industries of Odessa were planned.

The participants of this section found it necessary to request the State Planning Board Ukrainian SSR to organize production of cast calcium carbide with lower melting temperature, and the Council of Ministers Ukrainian SSR to consider the organization of specialized casting equipment plants in the Odesskiy and Khersonskiy sovnarkhozes and to speed up the production of high-temperature thermocouples at the Odessa Abrasive Materials Plant.

VI. Section of Hydromechanics and Hydraulic Engineering. Director of the Institute of Hydrology and Hydraulic Engineering, Candidate of Technical Sciences of the Academy of Sciences Ukrainian SSR .. M. Didkovs'kiy directed the work of this section. About 70 people participated in this section, 14 papers were presented, including seven by representatives of the Academy of Science institutions, and seven by representatives of the Odesskiy Sovnarkhoz.

Two problems were mentioned in papers and discussions, ship hydraulics and hydromechanics. A high scientific level and practical value of the presented papers were noted by the participants.

Each paper was evaluated in the resolution and new lines of study for future problems was indicated.

Resolution of the Session. The Guest Session of the Department of Technical Sciences of the Academy of Sciences Ukrainian SSR passed a resolution in which the work of scientists and production workers was approved. It was noted that these efforts corresponded to the contemporary requirements of the national economy and to tasks of science and technology. Future directions of the cooperative work of the Academy of Science institutions and organizations of the Odesskiy and Kharkovskiy Economical and Administrative Rayons were laid out.

The Session entrusted the Office of the Department of Technical Sciences of the Academy of Sciences Ukrainian SSR and the Council of National Economy of the Odesskiy Economic and Administrative Rayon with the task of developing jointly necessary ways to improve cooperation between the scientists of institutions of the Department of Technical Sciences of the Academy of Science Ukrainian SSR and the industrial organizations of the Odesskiy and Khersonskiy sovnarkhozes.

It was decided to check annually the fulfillment of commitments assumed by participants of the session.

S. D. Shevelenko, who heads the production department of the Odesskiy Sovnarkhoz, spoke of the fruitful accomplishments of the session and expressed his thanks to scientists of the Department of Technical Sciences of the Academy of Sciences of Ukrainian SSR for their active assistance to Odessa industry and scientific institutions. He expressed his hope that the cooperation between the Academy of Sciences Ukrainian SSR and Odessa industrial organizations will be further strengthened.

The Head of the Department of Technical Sciences of the Academy of Sciences Ukrainian SSR, G. V. Samsonov, stressed the fact in his closing speech that this session has served its purpose

and enriched the scientists and attending representatives of industry with new progressive ideas, and strengthened the cooperation of science and industry according to the lines of the CPSU.

On behalf of the scientists of the Department of Technical Sciences of the Academy of Sciences of Ukrainian SSR, G. V. Samsonov assured his listeners that they will dedicate all their knowledge for building Communism in our country.

The work of the session was covered by the Odesskaya Oblast press, radio, and television.

The scientists of the Academy of Sciences of Ukrainian SSR visited Odessa organizations, conducted seminars, and consultations for workers of various industries and the national economy, and discussed with them many actual problems of science and technology.

Academician of the Academy of Sciences Ukrainian SSR G. Savin and Corresponding Member of the Academy of Sciences Ukrainian SSR P. P. Nesterov visited the Odessa Steel Cables Plant. They inspected the existing departments and those under construction, familiarized themselves with production of wire and cables, and paid special attention to research underway at the plant. They also held a meeting at the Central Plant Laboratory. Workers and scientists of the Odessa Polytechnical Institute also took part in this meeting. The scientists familiarized their listeners with scientific tasks of the future.

Academician of the Academy of Sciences Ukrainian SSR B. E. Paton visited the Odessa Plant imeni Dzerzhinskiy and the Odessa Ship Repair Plant and discussed with engineers of these plants actual production problems.

Academicians of the Academy of Sciences Ukrainian SSR A. I. Nekrasov and K. r. Starodubov, Corresponding Members A. A. Gorshkov, V. F. Kopitov, and others went to the mechanized departments of the TsKTB of the Odesskiy Sovnarkhoz.

Corresponding Member of the Academy of Sciences Ukrainian SSR O. G. Ivakhnenko visited the Odessa Machine-Building Plant imeni Kirov.

Corresponding Member of the Academy of Sciences Ukrainian SSR G. V. Samsonov met with physicists of the Odessa Pedagogical Institute and metallurgical specialists of the Odessa Polytechnical Institute.

Institutes of the Department of Technical Sciences of the Academy of Sciences Ukrainian SSR organized at this session an exhibit of monographs, collections of scientific papers, and other literature. The Institute of Metallo-Ceramics and Special Alloys at the Academy of Sciences Ukrainian SSR demonstrated the advances in this field in an exhibit called, "Exemplary Metallo-Ceramic Products".

Excursions were organized for session participants to such Odessa industries as the Steel Cables Plant, the Plant imeni October Revolution, the Automated Machines Plant, and the new harbor "Il'ychevsk".

The Guest Session of the Department of Technical Sciences Ukrainian SSR was a good example of the strengthening of relations between science and industry and contributed to the active incorporation of the historical decisions of the XXII CPSU Congress into life.

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